USGS science for a changing world

Earthquake Shaking — Yellow Alert

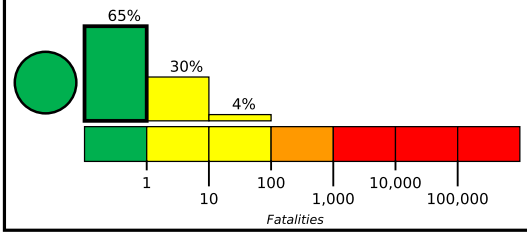
GSN · USAID FROM THE AMERICAN PEOPLE · ANSS

M 7.0, 93km ENE of Kuril'sk, Russia

Origin Time: 2020-02-13 10:33:44 UTC (Thu 20:33:44 local)
Location: 45.6313° N 148.9293° E Depth: 144.0 km
FOR TSUNAMI INFORMATION, SEE: tsunami.gov

PAGER Version 4
Created: 1 day, 0 hours after earthquake

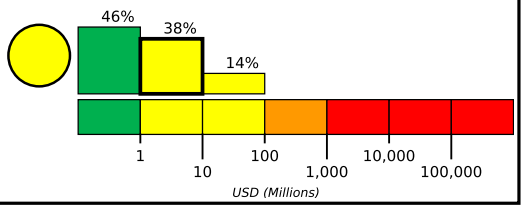
Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Russia. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses

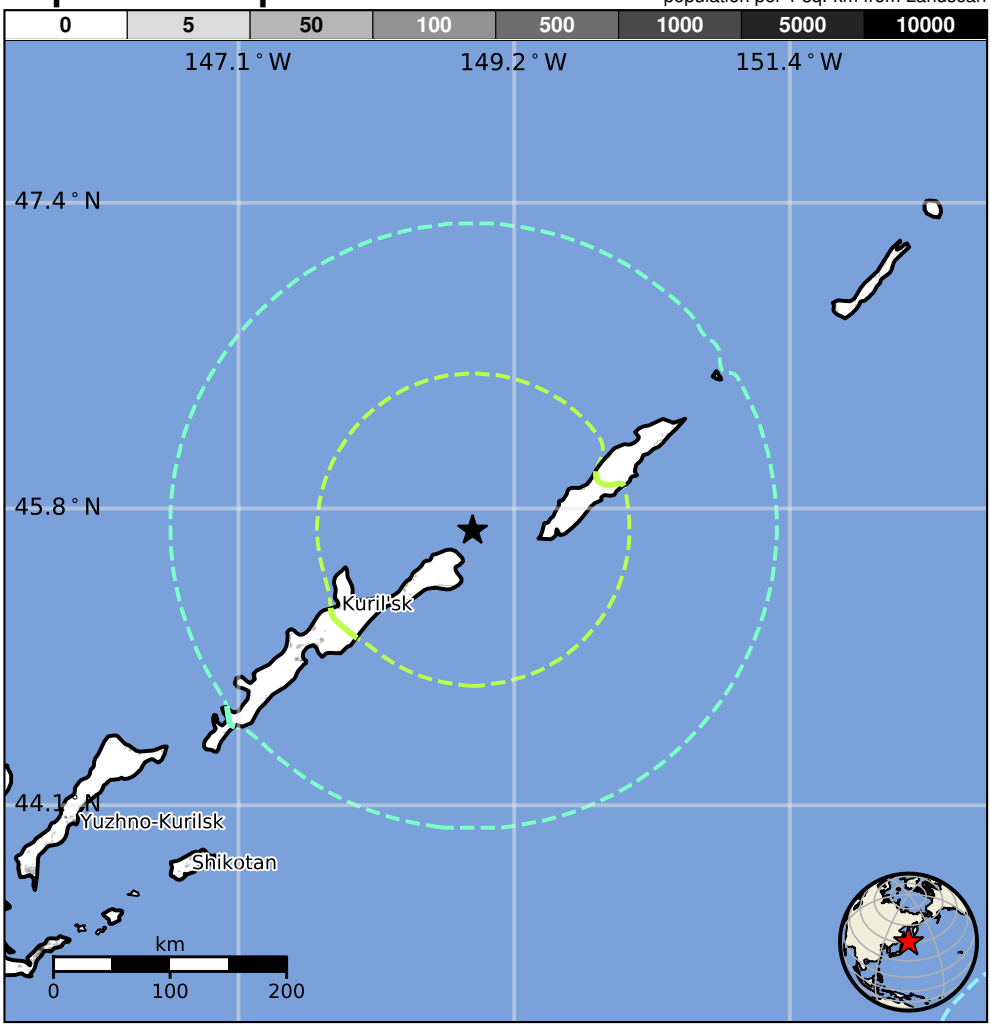


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	–*	40k*	3k	4k	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are adobe block and unreinforced brick with mud construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2006-11-15	350	8.3	I(0)	0
1973-06-24	321	7.1	VIII(2k)	0
1994-10-04	236	8.3	VIII(2k)	12

Recent earthquakes in this area have caused secondary hazards such as tsunamis and landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VI	**Kuril'sk**	**2k**
IV	**Shikotan**	**2k**
IV	Otrada	3k
IV	**Yuzhno-Kurilsk**	**6k**
IV	Nemuro	31k

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us70007pa9#pager

Event ID: us70007pa9